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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/036,105	10/17/2001	Roger L. Schultz	SC-01-05	4527

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EXAMINER

COLLINS, GIOVANNA M

ART UNIT PAPER NUMBER

3672

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/036,105

Applicant(s)

SCHULTZ ET AL.

Examiner

Giovanna M. Collins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13, 15 and 19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 15 and 19 is/are allowed.
- 6) ☒ Claim(s) 6-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

In view of the new rejections outlined in this office action, the finality of the last office action is withdrawn.

Specification

The disclosure is objected to because of the following informalities: The specification does not include a brief description of figures 61 and 62.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 6-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Referring to claim 6, the applicant appears to be claiming an apparatus however, there is no transitional phrase such as comprising or consisting of. This claim only appears to describe a method by which the apparatus operates. It is unclear exactly what the applicant is trying to claim.

Claims 7-9 depend from claim 6 and likewise are indefinite.

Claim Rejections - 35 USC § 103

2. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scherbatskoy 5,390,153 in view of McCullough 3,853,184.

Scherbatskoy discloses a method of operating a drill ring comprising monitoring downhole mud flow impedance, having the impedance altered (col. 8, lines 15-20) by a downhole valve (40) that opens or closes a shunt path for mud flow and the valve changes position according to readings of one or more sensors (101) located in the downhole sub assembly (col. 8, lines 15-17). Scherbatskoy does not disclose halting drilling when the impedance is altered. McCullough teaches halting drilling when a problem is encountered during drilling (col. 2, lines 10-13). As it would be advantageous to halt drilling if the sensor sensing abnormal conditions, it would be obvious to one of ordinary skill in the art to modify the method disclosed by Scherbatskoy to halt the drilling in view of the teachings of McCullough.

Referring to claims 11, Scherbatskoy teaches the sensor measures axial strain (col. 10, line 8).

3. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scherbatskoy 5,390,153 in view of McCullough 3,853,184 as applied to claim 10 and further in view of Aronstam et al. 6,443,228.

Scherbatskoy discloses the sensors can be various types of sensors but does not disclose the sensor measures vibrational frequency. Aronstam teaches many

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drilling system currently used include sensor that measure vibrational frequency (col. 1, lines –col. 2, line 4). As one of ordinary skill in the art would be familiar with the use of a sensor to measure vibrational frequency, it would be obvious to one of ordinary skill in the art to further modify the method disclosed by Scherbatskoy, as modified by McCullough to halt the drilling in view of the teachings of Aronstam.

4. Claims 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scherbatskoy 5,390,153 in view of McCullough 3,853,184 as applied to claim 10 and further in view of Randall et al. 5,511,037.

Scherbatskoy does not disclose that an adaptive filter analyzes the data from the sensor. Randall teaches that adaptive filter improves the quality of the data from a sensor by reducing noise (see col. 4, line 60-col. 5, line 4). As it would be advantageous to improve the quality of the data from the sensor and to reduce any noise, it would be obvious to one of ordinary skill in the art to further modify the method disclosed by Scherbatskoy, as modified by McCullough in view of the teachings of Randall.

Allowable Subject Matter

5. Claims 1-5, 15 and 19 are allowed.

Response to Arguments

6. Applicant's arguments with respect to claims 6-13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Giovanna M. Collins whose telephone number is 571-272-7027. The examiner can normally be reached on 6:30-3 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


gmc


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